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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,869	01/16/2004	Nusrallah Jubran	312951-P0051	8013
47604	7590	09/09/2008		
DLA PIPER US LLP P. O. BOX 9271 RESTON, VA 20195			EXAMINER  DOTTE, JANIS L	
			ART UNIT	PAPER NUMBER
			1795	
			MAIL DATE	DELIVERY MODE
			09/09/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/758,869

**Applicant(s)**

JUBRAN ET AL.

**Examiner**

Janis L. Dote

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

1. The examiner acknowledges the amendments to claims 1 and 9 filed on Jun. 23, 2008. Claims 1-16 are pending.
2. The examiner notes that the "Listing of claims" filed on Jun. 23, 2008, does not comply with 37 CFR 1.121. Although not indicated with the proper markings, the previously recited  $R_5$ ,  $R_5$ , and  $R_6$  Markush group in claim 1 has been amended. Hydrogen has been deleted from the Markush group. Compare the "Listing of claims" filed on Jun. 23, 2008, and that filed on Feb. 6, 2008.

However, in the interest of compact prosecution, the "Listing of claims" filed on Jun. 23, 2008, has been entered and replaces all prior versions and listings of claims in the instant application.

3. The rejection of claims 1-4, 6-12, and 14-16 under 35 U.S.C. 102(e) over US 7,320,849 B2 (Jubran'849) set forth in the office action mailed on Feb. 22, 2008, paragraph 7, has been withdrawn in response to the amendments to claims 1 and 9 filed on Jun. 23, 2008. Those amendments add the limitation that in the charge transport material formula, " $X_1$  is bonded to the nitrogen of the carbazoyl group in  $Y_1$  and  $X_2$  is bonded to the nitrogen of the carbazoyl group in  $Y_2$ ." For the reasons set

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forth by applicants in the response filed on Jun. 23, 2008, pages 6-10, the Jubran'849 charge transport material of formula (3) is not within the scope of the charge transport material formula recited in instant claims 1 and 9.

The terminal disclaimer filed on Jun. 23, 2008, disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent No. 7,320,849 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Accordingly, the rejection of claims 1-4, 6-12, and 14-16 on the ground of nonstatutory obviousness-type double patenting over claims 1-20 of US 7,320,849 B2 (Jubran'849), set forth in the office action mailed on Feb. 2, 2008, paragraph 9, has been withdrawn.

4. The following is a quotation of the first paragraph of

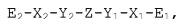
35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description

requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Instant claims 1 and 9 and claims dependent on claims 1 and 9 recite a charge transport material having the formula

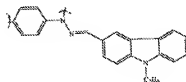
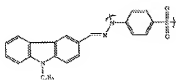


where " $Y_1$  and  $Y_2$  comprise, each independently, a carbazolyl group;  $X_1$  and  $X_2$ , each independently, have the formula  $-(CH_2)_m-$  where  $m$  is an integer between 0 and 20, inclusive, and one or more of the methylene groups is optionally replaced . . .

wherein  $X_1$  is bonded to the nitrogen of the carbazolyl group in  $Y_1$  and  $X_2$  is bonded to the nitrogen of the carbazolyl group in  $Y_2$ " (emphasis added).

The originally filed specification does not provide an adequate written description for the charge transport material formula now defined in the instant claims. The originally filed specification at page 10, lines 6-16, describes a charge transport material having the formula " $E_2-X_2-Y_2-Z-Y_1-X_1-E_1$  where " $Y_1$  and  $Y_2$  comprise, each independently, a carbazolyl group,  $X_1$  and  $X_2$ , each independently, have the formula  $-(CH_2)_m-$  . . . where  $m$  is an integer between 0 and 20, inclusive, and one or more of

the methylene groups is optionally replaced . . . E<sub>1</sub> and E<sub>2</sub> comprise, each independently, an epoxy group; and Z is a linking group comprising a bond, a  $-(CR_5=CR_6-)_n-$  group . . .” (emphasis added). Also see the originally filed specification, page 10, lines 6-21, and page 23, lines 20-30, and originally filed claims 1 and 9. The term “comprise” in the description that “Y<sub>1</sub> and Y<sub>2</sub> comprise, each independently, a carbazolyl group” (emphasis added) is open and includes, not only the Y groups being a carbazolyl group, but also includes any group that comprises a carbazolyl group, such as



and

, which

are shown in the US 7,320,849 B2 (Jubran'849) compound (3) at cols. 17-18. Furthermore, the originally filed specification at page 11, line 31, to page 12, line 7, states that the term “group” “indicates that the generically recited chemical entity (e.g., alkyl group, alkenyl group, aromatic group, epoxy group, arylamine group, etc.) may have any substituent thereon which is consistent with the bond structure of that group. For example, where the term 'alkyl group' is used, that term would not only

include unsubstituted linear, branched and cyclic alkyls, such as methyl, ethyl . . . but also substituents having heteroatom such 3-ethoxypropyl, 4-(N-ethylamino)butyl, 3-hydroxypentyl, 2-thiolhexyl, 1,2,3-tribromopropyl, and the like." Thus, the groups in the formula generically recited in instant claims 1 and 9, i.e.,  $Y_1$ ,  $Y_2$ ,  $X_1$ ,  $X_2$ ,  $E_1$ ,  $E_2$ , and  $Z$  can be substituted by a wide variety of functional groups.

The originally filed specification does not appear to provide an adequate written description of the generically recited charge transport compound formula in instant claims 1 and 9, where the broadly recited  $X_1$  and  $X_2$ , which includes  $X_1$  and  $X_2$  being a bond when the integer "m" is 0, are bonded to the nitrogen atom of the carbazolyl group in  $Y_1$  and  $Y_2$ , respectively, as recited in instant claims 1 and 9. The only description of charge transport compounds represented by the generic formula recited in instant claims 1 and 9 where both  $X_1$  and  $X_2$  are bonded to the nitrogen atom in the respective carbazolyl group in  $Y_1$  and  $Y_2$  is found in the one particular formula recited in originally filed claims 5 and 13. Also, see the originally filed specification at page 24, lines 6-10. In the formula in originally filed claims 5 and 13, both  $Y_1$  and  $Y_2$  are an R-substituted carbazolyl, both  $X_1$  and  $X_2$  are methylene, where each methylene is bonded to the nitrogen atom of the respective

R-substituted carbazolyl  $Y_1$  and  $Y_2$ , both  $E_1$  and  $E_2$  are epoxy, and Z is a "bond." The generic formula recited in instant claims 1 and 9 is broader than the one particular formula in originally filed claims 5 and 13. The formula in originally filed claims 5 and 13 does not provide an adequate written description of the charge transport compound formula broadly recited in instant claims 1 and 9. Applicants have not indicated where in the originally filed specification there is an adequate written description of the charge transport material formula where " $X_1$  is bonded to the nitrogen of the carbazolyl group in  $Y_1$  and  $X_2$  is bonded to the nitrogen of the carbazolyl group in  $Y_2$ " broadly recited in instant claims 1 and 9.

6. Claims 1 and 9 are objected to because of the following informalities:

In claim 1, line 9, the zero "0" in the terms "C=0" and "0=S=0," should be replaced with a capital -- O --.

In claim 1, line 11, the typographic error "heteroc" should be replaced with the term -- heterocyclic --. Compare instant claim 9, line 13.

In claim 9, line 10, the zero "0" in the terms "0," "C=0," and "0=S=0," should be replaced with a capital -- O --.

Appropriate correction is required.



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7. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Sandra Sewell, whose telephone number is (571) 272-1047.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Janis L. Dote/  
Primary Examiner, Art Unit 1795

JLD  
Sep. 3, 2008